

Project Name: Arkendale to Powell's Creek Third Track Date of Submission: 8/24/09 Version Number: 000

## High-Speed Intercity Passenger Rail (HSIPR) Program

### Application Form

### Track 1a–Final Design (FD)/Construction

### & Track 4–FY 2009 Appropriations Projects

Welcome to the Track 1a Final Design (FD)/Construction and Track 4 Application for the Federal Railroad Administration's High-Speed Intercity Passenger Rail (HSIPR) Program. Applicants for Track 1a FD/Construction and/or Track 4 are required to submit this Application Form and Supporting Materials (forms and documents) as outlined in Section G of this application and in the HSIPR Guidance.

We appreciate your interest in the program and look forward to reviewing your application. If you have questions about the HSIPR program or this application, please contact us at [HSIPR@dot.gov](mailto:HSIPR@dot.gov).

#### Instructions:

- Please complete the HSIPR Application electronically. See Section G for a complete list of the required application materials.
- In the space provided at the top of each section, please indicate the project name, date of submission (mm/dd/yy) and the application version number. The distinct Track 1a and/or Track 4 project name should be less than 40 characters and follow the following format: State abbreviation-route or corridor name-project title (e.g., HI-Fast Corridor-Track Work IV).
- For each question, enter the appropriate information in the designated gray box. If a question is not applicable to your FD/Construction Project, please indicate "N/A."
- Narrative questions should be answered concisely within the limitations indicated.
- Applicants must upload this completed application and all other application materials to [www.GrantSolutions.gov](http://www.GrantSolutions.gov) by August 24, 2009 at 11:59pm EDT.
- Fiscal Year (FY) refers to the Federal Government's fiscal year (Oct. 1- Sept. 30).
- Please direct questions to: [HSIPR@dot.gov](mailto:HSIPR@dot.gov)

### A. Point of Contact and Applicant Information

<b>(1) Application Point of Contact (POC) Name:</b> <b>Kevin B. Page</b>		<b>POC Title:</b> <b>Chief of Rail Transportation</b>		
<b>Street Address:</b> 600 East Main St., Suite 2102	<b>City:</b> <b>Richmond</b>	<b>State:</b> <b>VA</b>	<b>Zip Code:</b> <b>23219</b>	<b>Telephone Number:</b> <b>804.786.3963</b>
<b>Fax:</b> 804.225.3752		<b>Email:</b> kevin.page@drpt.virginia.gov		

(2) **Name of lead State or organization applying** (*only States may apply for Track 4*): Virginia Department of Rail and Public Transportation

(3) **Name(s) of additional States and/or organizations applying in this group** (*if applicable*): N/A

(4) **Is this project for which you are applying for HSIPR funding related or linked to additional applications for HSIPR funding that may be submitted in this or subsequent rounds of funding?** ☒ Yes ☐ No ☐ Maybe  
If “yes” or “maybe,” provide the following information:

Program/Project Name	Lead Applicant	Track	Total HSIPR Funding Proposed ( <i>if known</i> )	Status of Application
Virginia I-95 High-Speed Rail Corridor	Virginia DRPT	Track 2	\$1.75B	Will Apply
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied
		Track 1a - FD/Construction	\$	Applied

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## B. Project Overview

(1) <b>FD/Construction Project Name:</b> Arkendale to Powell's Creek Third Track
(2) <b>Indicate the Track under which you are applying: Track 1a - FD/Construction</b> Please note if you are applying for Track 1a–FD/Construction and Track 4 <u>concurrently</u> , you must submit <b>two separate versions</b> of this application into <a href="http://www.GrantSolutions.gov">www.GrantSolutions.gov</a> (one for Track 1a –FD/Construction and one for Track 4–FY 2009 Appropriations Projects).
(3) <b>Indicate the activity(ies) for which you are applying</b> (check both if applicable): <input checked="" type="checkbox"/> Final Design <input checked="" type="checkbox"/> Construction
(4) <b>What are the anticipated start and end dates for the FD/Construction Project?</b> (mm/yyyy) <b>Start Date:</b> 12/2009 <b>End Date:</b> 11/2011
<p>(5) <b>Total Cost of the FD/Construction Project</b> (year of expenditure (YOE) Dollars*): \$ 74,840,119</p> <p><b>Please provide proposed inflation assumptions and methodology, if applicable in the space below. Please limit response to 1,000 characters.</b></p> <p>The estimate shown in the supporting forms assumes an annual inflation rate of 4 percent. Construction costs escalated sharply until early 2008. The economic downturn has resulted in some contraction of the costs, and major heavy civil projects have seen bids significantly lower than initial estimates. While inflation and construction costs may increase, the overall historic rate of 4 percent is a middle ground projection for the next two years.</p> <p><b>Of the total cost of the FD/Construction Project, how much would come from the FRA HSIPR Program:</b> (YOE Dollars**) \$ 74,840,119. Virginia has funded \$2.5M in projects costs to-date. These funded costs were for the Preliminary Design Plans, and the NEPA Categorical Exclusion documentation.</p> <p><b>Indicate percentage of total cost to be covered by <u>matching funds</u></b> 0.0 %  <i>Applications submitted under Track 4 require at least a 50 percent non-Federal match to be eligible for HSIPR funding.</i></p> <p>* Year-of-Expenditure (YOE) dollars are inflated from the base year.  ** This is the amount for which the applicant is applying.</p>
<p>(6) <b>Project Overview Narrative.</b> Please limit response to 5,000 characters.</p> <p>Provide an overview of the main features and characteristics of the FD/Construction Project, including:</p> <ul style="list-style-type: none"> <li>• The location of the project including name of rail line(s), State(s), and relevant jurisdiction(s) (include map if available in supporting documentation).</li> <li>• Identification of service(s) that would benefit from the project, the stations that would be served, and the State(s) where the service operates.</li> <li>• How the project was identified through a planning process and how the project is consistent with an overall plan for developing High-Speed Rail/Intercity Passenger Rail service.</li> <li>• How the project will fulfill a specific purpose and need in a cost-effective manner.</li> <li>• The project's independent utility.</li> <li>• The specific improvements contemplated.</li> <li>• Any use of railroad assets or rights-of-way, and potential use of public lands and property.</li> <li>• Other rail services, such as commuter rail and freight rail that will make use of, or otherwise be affected by, the project.</li> </ul> <p>The proposed project would construct 11.4 miles of third track from milepost CFP 72 at Arkendale, Stafford County, VA to CFP 83.4 at Powell's Creek, Prince William County, VA on the CSX RF&amp;P Mainline. The project is in the northern segment of the</p>

Southeast High Speed Rail Corridor connecting Washington, DC to locations in Virginia, North and South Carolina, Georgia and Florida. The proposed third track utilizes the vacant main line slot on the recently completed double track Quantico Creek Bridge that parallels the original single track bridge. The \$26M bridge was constructed with regional, Commonwealth of Virginia and local funds.

This segment of third track was identified in the FRA's 1999 Report to Congress as a passenger rail improvement required in the corridor to support expanded intercity passenger rail service, while preserving freight railroad capacity and operations. To provide state funding for the early phases of this project, the track preliminary engineering and design was initially coupled with the development of a rail station project. The coupling allowed the station to be used as an in-kind match to state funding for the intercity passenger rail third track project. The rail station project, known as Cherry Hill, was proposed to be constructed by a developer of a new, adjacent residential development subsequent to the 1999 report. However, the developer is now bankrupt and the project plans no longer include the construction of the station. The elimination of the station removes any direct benefit to commuter operations, while maintaining the intercity and high-speed rail benefits identified in the 1999 Report to Congress.

This project fulfills the purpose and need identified in the FRA 1999 Report to Congress by constructing an operable segment of the overall corridor plan. This project was developed through the efforts of the I-95 Corridor Task Force, of which FRA is a participant, to be cost effective by selecting project limits that provide significant length of third track without building major river crossings. (The Quantico Creek Bridge at the northern terminus of the project was constructed with State and local funds as a separate project).

The Arkendale to Powell's Creek Third Track project does not rely on the construction of any other projects within the corridor to provide useful service. The third track segment, like other third track segments previously constructed with Commonwealth of Virginia funds, can be used to meet, pass, and overtake trains in the corridor to provide a reliable performance schedule for intercity and high speed Amtrak passenger trains and Virginia Railway Express (VRE) commuter trains, while preserving the freight operational environment.

The project will construct 11.4 miles of new third track. Two new interlockings will provide universal parallel movements between the three track segments and the existing double track at each end of the project. New small stream and creek bridges and drainage structures will be built adjacent to five existing structures. Grade crossing warning devices will be modified/upgraded at six existing crossings. Three existing sidings will be adjusted to accommodate the third track. Limited areas of right of way acquisition will be required; however, the majority of the project will be constructed on CSX right of way.

**(7) Status of Activities: Are any FD or Construction activities that are part of this planned investment underway or completed?**

☐ Yes (Final Design) ☐ Yes (Construction) ☒ No

**If "Yes," please describe the activities that are underway or completed in the table below.<sup>1</sup> If more than three activities, please detail in Section F of this application.**

Activity	Description	Completed? (If yes, check box)	Actual Initiation Date (mm/yyyy)	Actual or Anticipated Completion Date (mm/yyyy)
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		

**(8) Describe the project service objectives (check all that apply):**

<sup>1</sup> Please note: (a) requests for reimbursement of costs incurred prior to enactment of the relevant appropriations will not be considered and (b) supporting documentation for activities may also be required as noted in Appendix 2 of the HSIPR Guidance.

- ☐ Additional Service Frequencies  
☒ Improved Service Quality  
☒ Improved On-Time Performance on Existing Route

- ☒ Increased Average Speeds/Shorter Trip Times  
☒ Other (*Please Describe*): The ultimate corridor plan, of which this project is an important part, will implement the increased service frequencies and higher speed rail service capability envisioned for this corridor.

**(9) Types of capital investments contemplated** (*check all that apply*):

- ☒ Structures (bridges, tunnels, etc.)  
☒ Track Rehabilitation  
☒ New or restored sidings/passing tracks  
☒ Major Interlockings  
☒ Station(s)  
☒ Communication, Signaling and Control

- ☐ Rolling Stock Refurbishments  
☐ Rolling Stock Acquisition  
☐ Support Facilities (Yards, Shops, Admin. Buildings)  
☒ Grade Crossing Improvements  
☐ Electric Traction  
☐ Other (*Please Describe*):

**(10) Right-of-Way-Ownership.** Provide information for all railroad right-of-way owners in the FD/Construction Project area. Where railroads currently share ownership, identify the primary owner. *If more than three owners, please detail in Section F of this application.*

Type of Railroad	Railroad Right-of-Way Owner	Route Miles	Track Miles	Status of Agreements to Implement Projects
Class 1 Freight	CSX	11	22	Master Agreement in Place
Amtrak				Master Agreement in Place
Amtrak				Master Agreement in Place

**(11) Services.** Provide information for all existing rail services within project boundaries (freight, commuter, and intercity passenger). *If more than three services, please detail in Section F of this application.*

Type of Service	Name of Operator	Top Speed Within Project Boundaries		Number of Route-Miles Within Project Boundaries	Average Number of Daily One-Way Train Operations <sup>2</sup> within Project Boundaries	Notes
		Passenger	Freight			
Freight	CSX		59	11.4	26	
Commuter	VRE	69		11.4	12	
Intercity Passenger	Amtrak	69		11.4	20	

**(12) Rolling Stock Type.** Describe the fleet of locomotives, cars, self-powered cars, and/or trainsets that would be intended to provide the service upon completion of the project. *Please limit response to 1,000 characters.*

The existing intercity service consists of the existing Amtrak Northeast Regional fleet with diesel locomotives, plus the Auto Train. No new additional intercity trains will be started due to this project. The commuter service consists of the existing VRE commuter fleet with diesel locomotives. No new commuter trains will be started due to this project.

<sup>2</sup> One daily round-trip train operation should be counted as two daily one-way train operations.

- (13) **Intercity Passenger Rail Operator.** Provide the status of agreements with partners that will operate the benefiting high-speed rail/intercity passenger rail service(s) upon completion of the planned investment (e.g., Amtrak).  
Name of Operating Partner: Amtrak  
Status of Agreement: Final executed agreement on project scope/outcomes

- (14) **Benefits to Other Types of Rail Service(s).** Are benefits to non-intercity-passenger rail services (e.g., commuter, freight) foreseen?  
☐ Yes    ☒ No  
If “Yes”, provide further details in Section E, Question 2.

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## C. Eligibility Information

**(1) Select applicant type, as defined in Appendix 1.1 of the HSIPR Guidance (only States may apply for Track 4):**

- ☒ State  
☐ Amtrak

**If one of the following, please append appropriate documentation as described in Section 4.3.1 of the HSIPR Guidance:**

- ☐ Group of States  
☐ Interstate Compact  
☐ Public Agency established by one or more States  
☐ Amtrak in cooperation with a State or States

**(2) Establish Completion of Preliminary Engineering.** In the space(s) below, please list the documents that establish completion of Preliminary Engineering for the project covered by this application. See HSIPR Guidance Appendix 2.2. If more than four references need to be listed, please place the additional information in Question F.

Document Name	Completion Date (mm/yyyy)
Preliminary Engineering Plan Set	07/2009

**(3) Establish Completion of NEPA Documentation (the date document was issued and how documentation can be verified by FRA).** The following are approved methods of NEPA verification (in order of FRA preference): 1) References to large EISs and EAs that FRA has previously issued, 2) Web link if NEPA document is posted to a website (including www.fra.gov), 3) Electronic copy of non-FRA documents attached with supporting documentation, or 4) a hard copy of non-FRA documents (large documents should not be scanned but should be submitted to FRA via an express delivery service). See HSIPR Guidance Section 1.6 and Appendix 3.2.9.

Documentation	Date (mm/yyyy)	Describe How Documentation Can be Verified
<input checked="" type="checkbox"/> Categorical Exclusion Documentation	08/2009	Hand delivered to FRA, John Winkle - 8/11/2009
<input type="checkbox"/> Final Environmental Assessment		
<input type="checkbox"/> Final Environmental Impact Statement		

**(4) Indicate if there is an environmental decision from FRA (date document was issued and web hyperlink if available).**

Documentation	Date (mm/yyyy)	Hyperlink (if available)
<input type="checkbox"/> Categorical Exclusion Determination		
<input type="checkbox"/> Finding of No Significant Impact		
<input type="checkbox"/> Record of Decision		

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## D. Public Return on Investment

**(1) 1A. Transportation Benefits.** See HSIPR Guidance Section 5.1.1.1. Please limit response to 8,000 characters:

How is the project anticipated to improve Intercity Passenger Rail (IPR) service? Describe the overall transportation benefits, including information on the following (*please provide a level of detail appropriate to the type of investment*):

- **IPR network development:** Describe improvements to intermodal connections and access to stations as well as actual and potential expansions to the IPR network that may result from the project (including opportunities for interoperability with other services).
- **IPR service performance improvements** (*also provide specific metrics in table 1B below*): Please describe service performance improvements directly related to the project, as well as a comparison with the existing service (*without project*). Describe relevant reliability improvements (e.g., increases in on-time performance, reduction in operating delays), reduced schedule trip times, increases in frequencies, aggregate travel time savings (resulting from reductions to both schedule time and delays, expressed in passenger-minutes), and other relevant performance improvements.
- **IPR service results** (*also provide specific metrics in table 1B below*): Describe relevant outcomes of the service improvement such as increases in ridership, passenger-miles, and other results in comparison with the existing service (*without project*).
- **Suggested supplementary information** (*only when applicable*):
  - Transportation Safety: Describe overall safety improvements that are anticipated to result from the FD/Construction Project, including railroad and highway-rail grade crossing safety benefits, and benefits resulting from the shifting of travel from other modes to safer IPR service.
  - Cross-modal benefits from the FD/Construction Project, including benefits to:
    - ✓ Commuter Rail Services – Service improvements and results (applying the same approach as for IPR above).
    - ✓ Freight Rail Services – Service performance improvements (e.g., increases in reliability and capacity), results (e.g. increases in ton-miles or car-miles of the benefiting freight services), and/or other congestion, capacity or safety benefits.
    - ✓ Congestion Reduction/Alleviation in Other Modes; Delay or Avoidance of Planned Investments – Aviation and highway congestion reduction/alleviation, and/or other capacity or safety benefits. Describe any planned investments in other modes of transportation that may be avoided or delayed due to the improvement to IPR service that will result from the project.

The Arkendale to Powell's Creek Third Track project has independent utility and would reduce train movement conflicts. The reduction in conflicts is predicted to increase IPR OTP by 2 percent and could reduce running times for IPR by 4 minutes. There are no cross modal benefits.

Amtrak predicts that by 2030, 61,558 new riders above baseline growth will use the regional trains traveling through the project area. The economic analysis indicates that this project will be responsible for an average of 47,831 new annual riders, including induced demand.

Data provided by Amtrak indicates that in 2008, 712,320 passengers boarded or alighted along this route. Amtrak predicts that number to be 733,888 in 2009. The passengers boarding or alighting in Virginia along this route represented 153,426,605 trip miles in 2008, with an average trip length of 215 miles. This figure underscores the fact that trains operating along this route connect the major East Coast metropolitan areas, supporting the regional intercity passenger rail system. The completion of this project will support further corridor development and enhance the quality of the East Coast intercity passenger rail system.

**1B. Operational and Ridership Benefits Metrics:** In the table(s) below, provide information on the anticipated transportation benefits and ridership changes projected to result from the project. Please do not include benefits and changes that would occur even if the project is not implemented (for example, as a result of population or economic growth factors).

Project/Program Metric	Actual— FY 2008 levels	Projected Totals by Year (Actual Levels <u>Plus</u> Project-Caused Changes Only)		“X” If N/A or Unsure
		First Full Year After Project Completion	Fifth Full Year After Project Completion	
Annual passenger-trips	712,320	833,445	950,574	<input type="checkbox"/>
Annual passenger-miles (millions)	153.4	179.5	204.7	<input type="checkbox"/>
Annual IPR seat-miles offered (millions)				<input checked="" type="checkbox"/>
Average number of daily round train trip operations (typical weekday)	9	9	9	<input type="checkbox"/>
On-time performance (OTP) <sup>3</sup> – percent of trains on time at endpoint terminals	80.8%	82.8%	82.8%	<input type="checkbox"/>
Average train operating delays: minutes of en-route delays per 10,000 train-miles <sup>4</sup>	1,693			<input checked="" type="checkbox"/>
Top operating speed (mph)	70	70	70	<input type="checkbox"/>
Average scheduled operating speed (mph) (between endpoint terminals)	45	50	50	<input type="checkbox"/>

**(2) 2A. Economic Recovery Benefits.** *This section is required for Track 1a, and optional for Track 4. Please limit response to 4,000 characters. For more information, see Section 5.1.1.2 of the HSIPR Guidance.*

Describe the contribution the FD/Construction Project is intended to make towards economic recovery and reinvestment, including information on the following:

- How the project will result in the creation and preservation of jobs, including number of onsite and other direct jobs (on a 2,080 work-hour per year, full-time equivalent basis), and timeline for achieving the anticipated job creation.
- How the different phases of the project will affect job creation (consider the construction period vs. operating period)
- How the project will create or preserve jobs or new or expanded business opportunities for populations in Economically Distressed Areas (consider the construction period vs. operating period)
- How the project will result in increases in efficiency by promoting technological advances.
- How the project represents an investment that will generate long-term economic benefits (including the timeline for achieving economic benefits and describe how the project was identified as a solution to a wider economic challenge)
- If applicable, how the project will help to avoid reductions in State-provided essential services.

Job creation for the Arkendale to Powell's Creek Third Track is estimated based on the incremental project expenditures between 2009 and project completion in 2012. The Minnesota IMPLAN Group's input-output model is used to estimate direct, indirect and induced employment, associated output, value added and labor income. Employment represents full-

<sup>3</sup> As calculated and reported by Amtrak according to its existing procedures and definitions. An example can be found at page E-7 of the May 2009 Monthly Performance Report at <http://www.amtrak.com/pdf/0905monthly.pdf>. 'On-time' is defined as within the distance-based thresholds originally issued by the Interstate Commerce Commission, which are: 0 to 250 miles and all Acela trains—10 minutes; 251 to 350 miles—15 minutes; 351 to 450 miles—20 minutes; 451 to 550 miles—25 minutes; and 551 or more miles—30 minutes.

<sup>4</sup> As calculated by Amtrak according to its existing procedures and definitions. Useful background can be found at pages E-1 through E-6 of Amtrak's May, 2009 Monthly Performance Report at <http://www.amtrak.com/pdf/0905monthly.pdf>

time and part-time jobs created for a full year. Value Added represents total business sales (output) minus the cost of purchasing intermediate products, which is roughly equivalent to gross regional/domestic product.

The project would create a total of 562 (281 per year) annual direct additional full-time equivalent (FTE) jobs as shown in section 2B. The majority of the jobs created would be in the construction industry which historically employs significant numbers of minorities and lower income individuals.

Since this specific project is a component of the overall corridor program, and results in no additional service, there are no long term jobs created, however as the corridor program is completed and service levels increase, there will be direct and indirect jobs created.

**2B. Job Creation:** Provide the following information about job creation through the life of the FD/Construction Project. Please consider construction, maintenance, and operations jobs.

Anticipated number of <u>annual</u> onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis)	FD/ Construction Period	First full Year of Operations	Fifth full Year of Operations
	281 year 1 281 year 2	0	0

**(3) Environmental Benefits.** Please limit response to 4,000 characters.

How will the FD/Construction project improve environmental quality, energy efficiency, and reduction in the Nation's dependence on oil? Address project-caused changes in the following:

- Any projected reductions in key emissions (CO<sub>2</sub>, O<sub>3</sub>, CO, PM<sub>x</sub>, and NO<sub>x</sub>) and their anticipated effects. Provide any available forecasts of emission reductions from a baseline of existing service for the first and fifth years of full operation (*provide supporting documentation if available*).
- Any expected energy and oil savings from traffic diversion from other modes and changes in the sources of energy for transportation. Provide any available information on changes from the baseline of the existing service for the first and fifth years of full operation (*provide supporting documentation if available*).
- Use of green methods and technologies. Address green building design, "Leadership in Environmental and Energy Design" building design standards, green manufacturing methods, energy efficient rail equipment, and/or other environmentally-friendly approaches.

The Arkendale to Powell's Creek Third Track Project provides direct environmental benefits, and supports the development of a corridor that will have significant environmental benefits.

The project will provide the following environmental benefits over a 30-year timeframe:

Gallons of fuel avoided	1,451,443
Tons of CO <sub>2</sub> Avoided	8,901
Tons of NO <sub>x</sub> Avoided	41.4
Tons of VOC Avoided	22.3

The fuel savings will result from diverted trips from other modes such as air carriers and private automobiles.

The methodologies and modeling of the environmental benefits are contained in the Cost Benefit Analysis & Economic Impact Appendix.

The only station-related work in the project will be the relocation of an existing platform, therefore the project's ability to incorporate Green Building Design is limited. However, energy efficient automatic site lighting for the platform will be designed. The project could also incorporate some LEED principles in other aspects of construction. The railroad ballast could be sourced from two nearby quarries, consistent with the LEED principle of sourcing local materials to reduce transportation impacts to the environment. Likewise, the wooden railroad ties could be sourced from within Virginia.

**(4) Livable Communities Project Benefits Narrative.** *(For more information, see Section 5.1.1.3 of the HSIPR Guidance, Livable Communities). Please limit response to 3,000 characters.*

How will the FD/Construction Project foster Livable Communities? Address the following:

- Integration with existing high density, livable development: Provide specific examples, such as (a) central business districts with walking/biking and (b) public transportation distribution networks with transit-oriented development.
- Development of intermodal stations: Describe such features as direct transfers to other modes (both intercity passenger transport and local transit).

To establish an alternative to development practices that focus on segregating land uses and the automobile culture that degrades the character of our communities, the Ahwahnee Principles (1991) include a series of community development solutions for regions and communities. The plans that Virginia has developed are consistent with these community development ideals.

At the regional level, the Arkendale to Powell's Creek Third Track project, while having independent utility to improve train movements, is located in the Southeast Corridor that will link the central business districts between Virginia and Florida, including Raleigh and Charlotte, NC, Savannah, GA, and Miami, FL, with major metropolitan centers along the Northeast Corridor.

The overall corridor program is also geared to community improvements. The Virginia I-95 High-Speed Corridor program, to be submitted under a Track 2 application, includes projects to enhance the modal connectivity at stations in the corridor and increase passenger rail service to downtown stations. The proposed corridor project at Alexandria will provide ADA compliant connections to local buses and the Washington Metro system. The extensive work in Richmond will bring additional train service to Main Street Station, Richmond's downtown station, and foster the coordination of transportation and land use, a key goal of the City of Richmond's Downtown Plan. The corridor plan also includes work for a new suburban station in Richmond to replace the existing Staples Mill Station. DRPT has worked with Henrico County to select a site that embodies Transit-Oriented Development (TOD) principles and fits into the county's recently updated land use master plan.

Specifically, the Arkendale to Powell's Creek Third Track project was developed with an eye toward the future. DRPT has been working with Prince William and Stafford counties in the development of a community at Cherry Hill which will create a TOD in this rapidly growing area.

At the implementation level, the Arkendale to Powell's Creek Third Track project will improve train movements and OTP, therefore increasing the reliability of passenger rail service and making travel by rail an attractive option over auto or air travel. By adhering to key community development principles, the Arkendale to Powell's Creek Third Track project will not only improve train travel in the region today, but will also enhance the vitality of communities along the corridor over the long term.

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## E. Project Success Factors

- (1) Project Management Approach and Applicant Qualifications Narrative:** *Please provide separate responses to each of the following. Additional information on project management is provided in Section 5.1.2.1 of the HSIPR Guidance, Project Management.*

**1A. Applicant qualifications.** *Please limit response to 2,000 characters.*

Management experience: Does the applicant have experience in managing rail investment projects and managing projects of a similar size and scope to the one proposed in this application?

☒ Yes - Briefly describe experience (brief project(s) overview, dates)

☐ No- Briefly describe expected plan to build technical and managerial capacity; provide reference to Project Management Plan.

The Commonwealth of Virginia has funded and developed over \$85M in large rail capital projects in this corridor with its partners at CSX, Amtrak, VRE, and FRA. Since only Commonwealth funds were involved in previous corridor projects, as the administering agency DRPT used existing management systems to control the projects. The projects met the Commonwealth's financial requirements for expenditure of Commonwealth funds, were well managed and coordinated, and met schedule commitments.

In addition, the Commonwealth has an integral role in the development, funding, and execution of two large rail transit projects; the Dulles Corridor Metrorail Project (\$2.6B) and the Tide, Norfolk's light rail project (\$288M) are currently under construction through FTA Full Funding Grant Agreements. These two projects follow the FTA project management systems.

The OMB and FRA HSIPR guidance sets out a slightly different management and reporting structure for projects using ARRA funds than DRPT's current procedures. To address these differences, DRPT has developed a Program Management Plan (PMP) for the FRA ARRA projects in Virginia. The PMP embraces the concepts of the FTA management processes used on state FTA funded projects, and meets the OMB and FRA requirements.

In order to meet DRPT's staffing needs for technical expertise, in 2007, DRPT established contracts with six consultant teams to provide embedded program and project management staff, in addition to on-call planning and engineering services. This combination of resources through DRPT staff and technical experts has delivered significant benefits to DRPT projects. For example, the rail team was able to value engineer a solution on the AF to RW project in this corridor that eliminated over \$500,000 in change order requests.

- 1B. Describe the organizational approach for the different project stages included in this application (final design, construction), including the roles of staff, contractors and project stakeholders in implementing the project. For construction activities, provide relevant information on work forces, including railroad contractors and grantee contractors.** *Please limit response to 2,000 characters.*

DRPT will lead the project, in coordination with project partners as defined below.

Final Design - DRPT has worked closely with VRE, CSX, FRA and Amtrak through the I-95 Corridor Task Force on the preliminary engineering of the Arkendale to Powell's Creek project, and this relationship will continue through Final Design and Construction. The VRE design team, which has the institutional knowledge of the design work, will continue developing the project in coordination with DRPT. This partnership between DRPT and VRE successfully delivered the Quantico Creek Bridge project, which is within the Arkendale to Powell's Creek project footprint. The Quantico Creek Bridge project, which cost \$26 million and had a 30-month construction timeline, provided a new, two-track ballasted deck bridge that was delivered on time and on budget.

Construction - Since the project is on CSX right of way, CSX and their civil contractors will perform the construction work. Similar to the VRE design partnership, DRPT and CSX have partnered on over \$85M in successful projects in this corridor. The Alexandria to Franconia (AF to RW)(\$22.3M) and Fredericksburg to Hamilton (FB to HA)(\$11.6M) projects are currently under construction with CSX as the construction manager and contractor for the track work. It should be noted that the FB to HA project is funded in part by an FRA grant. CSX must use their internal workforce for track, signals, and some bridge work as required by union agreement, but the civil, utility, drainage, and roadbed/foundation work may be contracted out to a CSX pre-qualified contractor.

In the past, projects were scheduled by CSX and DRPT to provide a consistent workforce staff level. This project schedule would directly follow the completion of the AF to RW project, and would allow CSX to retain existing union crews in the corridor.

VRE will manage the project construction, in coordination with DRPT and CSX.

**1C. Does the FD/Construction Project require approval by FRA of a waiver petition from a Federal railroad safety regulation? (Reference to, or discussion of, potential waiver petitions will not affect FRA's handling or disposition of such waiver petitions.)**

- ☐ YES- If yes, explain and provide a timeline for obtaining the waivers  
☒ NO

*Please limit response to 1,500 characters.*

All passenger rail service is currently existing and planned service is provided by Amtrak and VRE with FRA compliant vehicles.

**1D. Provide a preliminary self-assessment of project uncertainties and mitigation strategies (consider funding risk, schedule and budget risk and stakeholder risk). Describe any areas in which the applicant could use technical assistance, best practices, advice or support from others, including FRA. Please limit response to 2,000 characters.**

As with any project at the preliminary engineering level, there are details and some uncertainties to be resolved during the final design process. DRPT and its partners have worked through this process on the other projects constructed in this corridor. The I-95 Task Force has been a valuable resource to identify risks, develop technical and procedural solutions to mitigate the risks, and to identify and apply best practices. DRPT and its partners will continue to work together with the I-95 Task Force to minimize risks for this project.

The PMP contains several procedures designed to either ascertain or control risks. The Risk Analysis requirement formalizes the process of identifying knowable risks and developing strategies for mitigation. The Value Engineering requirements will reduce the financial risks of the project by identifying best practices. The Change Control Board detailed in the PMP is used to control the budget, quality, performance and schedule risks associated with changes in all phases of the project cycle.

Employing all of the above strategies will reduce the risk, however events may occur that are unavoidable and that may result in budget issues. The Commonwealth understands that the ARRA grants from the FRA will be capped at a certain percentage of cost and also at a certain level. The Commonwealth will be responsible for cost over-runs. Fortunately, Virginia has a dedicated revenue source for railroad projects that can be used to cover any increased costs of this project.

**(2) Stakeholder Agreements Narratives. Additional information on Stakeholder Agreements is provided in Section 5.1.2.2 of the HSIPR Guidance.**

Under each of the following categories, describe the applicant's progress in developing requisite agreements with key stakeholders. In addition to describing the current status of any such agreements, address the applicant's experience in framing and implementing similar agreements, as well as the specific topics pertaining to each category.

**2A. Ownership Agreements – Describe how agreements will be finalized with railroad infrastructure owners listed in the "Right-of-Way Ownership" and "Service Description" tables in Section B. If appropriate, "owner(s)" may also include operator(s) under trackage rights or lease agreements. Describe how the parties will agree on project design and scope, project benefits, project implementation, use of project property, project maintenance, scheduling, dispatching and operating slots, project ownership and disposition, statutory conditions and other essential topics. Summarize the status**

and substance of any ongoing or completed agreements. *Please limit response to 2,000 characters.*

DRPT has executed a Master Construction Agreement and a Framework Agreement with CSX for the corridor development project that encompasses the Arkendale to Powell's Creek footprint. DRPT has also executed an Operating Agreement with Amtrak for the new state supported Amtrak service, and an Agreement in Principle for the ARRA projects. CSX endorsed the Commonwealth's Track 1a project in writing on August 23, 2009.

The project-specific requirements are contained in specific grant agreements or, in the case of CSX, amendments to existing construction agreements. The base agreements and amendments cover maintenance, ownership, reversion (state law requires maintaining a contingent interest in state funded capital improvements) and operational and support services.

**2B. Operating Agreements** – Describe the status and contents of agreements with the intended operator(s) listed in “Services” table in the Project Overview section above. Address project benefits, operation and financial conditions, statutory conditions, and other relevant topics. *Please limit response to 2,000 characters.*

The existing intercity service in the corridor is operated by Amtrak under its federal authority. Amtrak operates over CSX trackage and right of way. CSX collects an access fee from Amtrak to maintain the infrastructure and to provide services such as dispatching. The Arkendale to Powell's Creek Third Track project will not add new trains to the corridor.

However, the Commonwealth of Virginia entered into an agreement with Amtrak to fund two new state supported Northeast regional trains starting in late 2009. The Operating Agreement with Amtrak addresses operations, crews, equipment, passenger services such as ticketing and reservations, and Amtrak general and administrative (G&A) costs. The two new regional trains will operate from Richmond and Lynchburg, Virginia to and from the Northeast Corridor as far north as Boston.

In addition to the operating and maintenance costs, the Commonwealth is funding station improvements at Staples Mill Station in Richmond and at Kemper Street Station in Lynchburg to support the new trains. The Staples Mill Improvements were designed by DRPT's GEC consultant and are being constructed by VDOT.

**2C. Selection of Operator** – This question applies to Track 1a only. If the proposed operator railroad was not selected competitively, please provide a justification for its selection, including why the selected operator is most qualified, taking into account cost and other quantitative and qualitative factors, and why the selection of the proposed operator will not needlessly increase the cost of the project or of the operations that it enables or improves. *Please limit response to 1,000 characters.*

Amtrak operates all of the intercity trains on the corridor under its national network, and will operate the two new state supported services which will begin in late 2009. For the new service, Amtrak was selected as the service operator because the service extends existing Northeast Regional trains that previously terminated at Washington Union Station into Virginia.

**2D. Other Stakeholder Agreements** – Provide relevant information on other stakeholder agreements including State and local governments. *Please limit response to 2,000 characters.*

The VRE Operations Board has adopted a resolution endorsing the project.

**2E. Agreements with operators of other types of rail service** – Describe any cost sharing agreements with operators of non-intercity passenger rail service (e.g., commuter, freight). *Please limit response to 2,000 characters.*

The Commonwealth of Virginia is a funding partner of VRE operations. This project is an intercity passenger rail project to provide for train meets and overtakes and to reduce conflicts for Amtrak trains. As such, cost sharing is not applicable.

**(3) Financial Information.****3A. Capital Funding Sources.** Please provide the following information about your funding sources (if applicable).

Non FRA Funding Sources	New or Existing Funding Source?	Status of Funding <sup>5</sup>	Type of Funds	Dollar Amount (YOE Dollars)	% of Project Cost	Describe Uploaded Supporting Documentation to Help FRA Verify Funding Source
N/A	New	Committed		\$0.00	0	N/A
	New	Committed				
	New	Committed				

**3B. Capital Investment Financial Agreements:** Describe any cost sharing contribution the applicant intends to make towards the FD/Construction Project, including its source, level of commitment, and agreement to cover cost increases or financial shortfalls. Describe the status and nature of any agreements between funding stakeholders that would provide for the applicant's proposed match, including the responsibilities and guarantees undertaken by the parties. Provide a brief description of any in-kind matches that are expected. *Please limit response to 2,000 characters.*

The Commonwealth of Virginia has funded the development of the Preliminary Engineering and NEPA CE documentation for this project at a cost of \$2.5M.

**3C. Operating Financial Plan:** Does the applicant expect that the State operating subsidy requirements for the benefiting intercity passenger rail service will significantly increase, **as a result of the project**, during the first five years after project completion?

☐ Yes ☒ No

If "Yes," please complete the table below (in YOE dollars) and answer the following questions. *Please limit response to 2,000 characters.*

(a) How did you project future State operating subsidies for the benefiting service(s); and

(b) What are the source, nature, and likelihood of the funding that will enable the State to finance the projected increases in annual operating subsidies due to the project?

<sup>5</sup> **Reference Notes:** The following categories and definitions are applied to funding sources:

**Committed:** Committed sources are programmed capital funds that have all the necessary approvals (e.g. legislative referendum) to be used to fund the proposed project/program without any additional action. These capital funds have been formally programmed in the State Rail Plan and/or any related local, regional, or State Capital Investment Program CIP or appropriation. Examples include dedicated or approved tax revenues, State capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project/program, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed project/program.

**Budgeted:** This category is for funds that have been budgeted and/or programmed for use on the proposed project but remain uncommitted, i.e., the funds have not yet received statutory approval. Examples include debt financing in an agency-adopted CIP that has yet to be committed in their near future. Funds will be classified as budgeted where available funding cannot be committed until the grant is executed, or due to the local practices outside of the project sponsor's control (e.g., the project development schedule extends beyond the State Rail Program period).

**Planned:** This category is for funds that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, requests for State/local capital grants, and proposed debt financing that has not yet been adopted in the agency's CIP.

Subsidy	Actual— FY 2009 levels (YOE Dollars)	Projected Totals by Year (Actual Levels Plus Project Caused Changes Only) (YOE Dollars)				
		First Full Year After Project Completion	Fifth Full Year After Project Completion			
State operating subsidy (total for all benefiting services)						
<p><b>(4) Financial Management Capacity and Capability</b> – Provide audit results and describe applicant capability to absorb potential cost overruns, financial shortfalls, or financial responsibility for potential disposition requirements (include as supporting documentation as needed). Provide statutory references/ legal authority to build and oversee a rail capital investment. <i>Please limit response to 2,000 characters.</i></p> <p>See the attached financial plan.</p>						
<p><b>(5) Timeliness of Project Completion</b> – Provide the following information on the dates and duration of key activities, if applicable. <i>For more information, see Section 5.1.3.1 of the HSIPR Guidance, Timeliness of Project Completion.</i></p>						
Final Design Duration:	Phased Bridge & Civil Site Packages - 6 months					
Construction Duration:	Phased Bridge & Civil Site Packages - 18 months					
Rolling Stock Acquisition Duration:	N/A months					
Rolling Stock Testing Duration:	N/A months					
Service Operations Start date:	11/2011 (mm/yyyy)					
<p><b>(6) If applicable, describe how the project will promote domestic manufacturing, supply and other industries, including United States-based equipment manufacturing and supply industries.</b> <i>Please limit response to 1,500 characters.</i></p> <p>The Arkendale to Powell's Creek Third Track project will incorporate the required federal 'Buy American' contract language to ensure that domestic sources benefit from the ARRA expenditures. DRPT expects that there will be positive local impacts that result from this project. There are two local stone quarries that regularly supply railroad ballast to CSX, and it is expected that the new track construction will generate local material orders. Likewise, there are two wood tie manufacturing facilities in Virginia that are likely to receive material orders as a result of this project.</p> <p>There will be opportunities for supply industries to benefit from this project. Materials such as siltfence, geotextiles, vegetative matting, asphalt, select fill and aggregate materials, concrete, rebar and other construction materials will be required to complete this project. The entire supply chain will benefit as these materials are produced, distributed, sold, and delivered for the project.</p> <p>Many of the track-related materials and components are still manufactured domestically and will be procured for this project.</p>						
<p><b>(7) If applicable, describe how the project will help develop US professional railroad engineering, operating, planning and management capacity needed for sustainable HSR/IPR development in the United States, including promotion of a diverse workforce.</b> <i>Please limit response to 1,500 characters.</i></p> <p>DRPT will use a range of partners to accomplish this project. Our partners include CSX, VRE, Amtrak, and consultants. The increased workload required by this and other projects enable our partners to employ railroad staff, engineers, and technical consultants. DRPT and its partners recognize the need for developing professional railroad staff in all areas, especially at a time when the industry faces a large loss of capable people and their wealth of knowledge and experience due to retirement. Our partners are actively developing new staff by recruiting recent graduates for positions in their organizations. Our partners are all heavily involved in the railroad industry and support industry organizations such as AREMA and APTA. Our consultants and other partners support the technical committees in the industry organizations, creating a body of knowledge and best practices that can be used by the industry as a whole. AREMA and APTA both provide membership-sponsored scholarships to deserving students studying for careers in</p>						

the rail industry at several universities.

Virginia has a record of encouraging small, women and minority business participation in its projects.

Governor Kaine recently issued Executive Order 85, which directs that Virginia Workforce Connection (VWC), the official Web site for job vacancy listings in Virginia, be used by all state agencies, contractors and sub-recipients for the recruitment of jobs directly created by ARRA.

Project Name: Arkendale to Powell's Creek Third Track Date of Submission: 8/24/09 Version Number: 000

## F. Additional Information

**(1) Please provide any additional information, comments, or clarifications and indicate the section and question number that you are addressing** (e.g., Section E, Question 1B). *This section is optional.*

*B.9- The stations box is checked due to the platform relocation required to accommodate the third track at Quantico Station. No other station work is anticipated.*

*D.1B- The project has independent utility, but is part of a larger corridor development effort. This project will be built to 70 mph, but is designed to accommodate the 90 mph maximum speed planned for this segment of the corridor. The increase in speed from 70 mph to 90 mph will be performed in conjunction with the overall corridor speed improvements that were shown in the pre-application for the Track 2 corridor project and will be further discussed in the final Track 2 application.*

*D.2B- The Cost Benefit Analysis and Economic Impact documentation details the job creation information.*

Project Name: Arkendale to Powell's Creek Third Track Date of Submission: 8/24/09 Version Number: 000

## G. Summary of Supporting Materials

Application Form	Required	Optional	Reference	Description	Format
<input checked="" type="checkbox"/> This Application Form	✓		HSIPR Guidance Section 4.3.3.3	This document to be submitted through <i>GrantSolutions</i> .	Form
Supporting Forms	Required	Optional	Reference	Description	Format
<input checked="" type="checkbox"/> General Info.	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
<input checked="" type="checkbox"/> Detailed Capital Cost Budget	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
<input checked="" type="checkbox"/> Annual Capital Cost Budget	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
<input checked="" type="checkbox"/> Project Schedule	✓		HSIPR Guidance Section 4.3.5	This document to be submitted through <i>GrantSolutions</i> .	Form
Supporting Documents	Required	Optional	Reference	Description	Format
<input checked="" type="checkbox"/> Map of the Planned Investment		✓	Application Question B.6	Map of the Planned Investment location. Please upload into <i>GrantSolutions</i> .	None
Standard Forms	Required	Optional	Reference	Description	Format
<input checked="" type="checkbox"/> SF 424: Application for Federal Assistance	✓		HSIPR Guidance Section 4.3.3.3	Please submit through <i>GrantSolutions</i>	Form

<input checked="" type="checkbox"/> SF 424C: Budget Information-Construction	✓		HSIPR Guidance Section 4.3.3.3	Please submit through <i>GrantSolutions</i>	Form
<input checked="" type="checkbox"/> SF 424D: Assurance Construction	✓		HSIPR Guidance Section 4.3.3.3	Please submit through <i>GrantSolutions</i>	Form
<input checked="" type="checkbox"/> FRA Assurances Document	✓		HSIPR Guidance Section 4.3.3.3	May be obtained from FRA's website at <a href="http://www.fra.dot.gov/downloads/admin/assurancesandcertifications.pdf">http://www.fra.dot.gov/downloads/admin/assurancesandcertifications.pdf</a> . The document should be signed by an authorized certifying official for the applicant. Submit through <i>GrantSolutions</i> .	Form

**PRA Public Protection Statement:** Public reporting burden for this information collection is estimated to average 32 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. According to the Paperwork Reduction Act of 1995, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with, a collection of information unless it displays a currently valid OMB control number. The valid OMB control number for this information collection is **2130-0583**.